STUDENT NAME: _____

BIOTECHNOLOGY
Performance Evaluation Checklist
2007

Performance rating scale:

4 = highly skilled Successfully demonstrated without supervision
3 = moderately skilled Successfully demonstrated with limited supervision
2 = limited skill Demonstrated with close supervision
1 = not skilled Demonstration requires direct instruction and supervision

A minimum score of 3 for each of the following performance skills must be achieved to meet State skill certification requirements. Transfer the average score for each of the following performance skills onto the Performance Evaluation Score Sheet.

01.02 Research and present biotechnology concepts using effective communication skills.

_____ **Average Score**

02.02 Demonstrate proper aseptic/sterilizing techniques.

_____ Cleaning of work area.

_____ Flaming of inoculation devices.

_____ Autoclaving media and materials.

_____ Hand washing

_____ **Average Score**

03.02 Maintain accurate records and documentation by reporting relevant data in order of occurrence.

_____ **Average Score**

03.04 Practice proper use and handling of pipettes.

_____ Pipet small and large volumes accurately.

_____ Demonstrate proper use of pipetting devices.

a. Micropipettors (adding/removing tips, changing volume settings, proper handling).

b. Pipet aides (proper handling of bulbs, pumps, etc.).

_____ **Average Score**

04.04 Prepare solutions of defined concentrations and pH.

_____ Calculating correct concentrations and volumes of solutions.

_____ Demonstrate proper use of a balance (taring, use of weigh boats).

_____ Proper labeling of solution containers.

_____ Average Score

06.01 Prepare bacterial growth media.

_____ Pour plates aseptically.

_____ Add screening reagents appropriately.

_____ Proper labeling of plates or tubes.

_____ Sterilize equipment and media using an autoclave.

_____ Average Score

06.02 Demonstrate the ability to culture and maintain microorganisms.

_____ Isolating single bacterial colonies.

_____ Inoculating media.

_____ Identifying unknown microorganisms.

_____ Utilizing Gram stain technique.

_____ Balancing a centrifuge correctly when pelleting bacteria or DNA.

_____ Proper use of microscopes in viewing microorganisms.

_____ Average Score

07.01 Perform and analyze DNA gel electrophoresis.

_____ Make and pour agarose gel.

_____ Load gels with sample.

_____ Analyze stained gels.

_____ Average Score

07.02 Demonstrate the ability to use proper separation techniques to differentiate between proteins based on size and structure (chromatography and SDS-PAGE).

_____ Perform chromatography to separate or purify proteins.

_____ Load polyacrylamide gel with protein samples.

_____ Analyze stained gels.

_____ Average Score

08.01 Perform a transformation and analyze results.

_____ Transform bacteria with plasmid DNA.

_____ Identify transformed bacteria through use of selective media.

_____ Average Score

08.02 Purify plasmid DNA and analyze results.

_____ Conduct a mini-, midi-, or maxi-prep to purify plasmid DNA.

_____ Analyze results of plasmid prep by gel electrophoresis or spectrophotometry.

_____ Average Score